Haystack Fire Management Unit

The Haystack FMU is 180,003 acres in size. The majority of FMU is in Federal Direct Protection Area (DPA) responsibility; CALFIRE has DPA responsibility on three pieces within the FMU. Two of these CALFIRE DPA pieces have small in-holdings of Klamath National Forest (KNF) lands within them, the other piece (Eastern side of Humbug Creek) lies entirely inside the KNF boundary. These KNF lands protected by CALFIRE are covered by a Memorandum of Understanding for fire protection responsibilities. The CALFIRE protection area of this fireshed is under full suppression management.

Fire Protection Responsibility	Acres	Percent of FMU
Klamath National Forest	77,451	72%
CalFire	30,552	28%
Wildland Urban Interface	**Acres**	**Percent of FMU**
Community At Risk	585	1%
Defense Zone	18,764	17%
Threat Zone	60,526	56%

Due to the extensive checkerboard ownership pattern inside this FMU, the CALFIRE DPA lands within and adjacent to the KNF boundary, proximity of Yreka and other communities, and the Interstate 5 travel corridor; potential is little to nonexistent for any resource benefit wildland fires. Full suppression management of any fires is the most likely scenario.

3.2.2 Guidance

LMP guidance specific the Management Areas located in the FMU is listed below.

Management Area	Acres	Percent of FMU
Late Successional Reserve	3,228	3%
TES Species Habitat	494	<1%
Special Interest Areas	47	<1%
Riparian Reserves	15,931	15%
Retention VQO	3,264	3%
Recreational River	4	<1%
Partial Retention VQO	15,475	14%
General Forest	21,412	20%
No Data	884	<1%
Private Lands (may include BLM)	28,516	26%
Land Outside Forest Boundary	18,748	17%

Management Area 5 - Special Habitat

TES species habitat in this FMU includes a portion of the Collins Baldy LSR, six Northern Spotted Owl activity centers, and a substantial portion of the habitat for the sensitive plant, *Calochortus persistens* (Siskiyou mariposa lily). The Collins Baldy LSR is in a “checkerboard ownership” pattern, with every other section privately owned.

Description

This management area includes the following types of special habitat: Late-Successional Reserves, which are designed to provide for the viability needs of all late-successional species in an ecosystem approach; other lands are designated by the U.S. Fish and Wildlife Service (USFWS) and the Forest as habitat needed to support the recovery of Federally listed T&E wildlife populations and habitat for the Sensitive plant, *Calochortus persistens* (Siskiyou mariposa lily).

Each of the T&E species requires different habitat. When the habitat of these species overlap, the management priority shall be placed on the species with the most specialized habitat needs (that is, the rarest occurring habitat).

Management actions proposed for these areas will be consistent with the recommendations for habitat management provided in the USFWS Recovery Plans for these species and the Forest Service direction applicable to the recovery plan.

Late Successional Reserves

Late-Successional Reserves are designed to provide for the viability needs of all late-successional species in an ecosystem approach. Meet the habitat requirements as outlined in the *Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* signed April 13, 1994 and the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* dated February 1994 (FSEIS).

Management Goals

The objective of LSRs is to protect and enhance conditions of late-successional and “old growth” forest ecosystems, which serve as habitat for late-successional and "old growth"-related species including the northern spotted owl. These reserves are designed to maintain a functional, interacting, late-successional and "old growth" forest ecosystem.

Desired Future Condition

The characteristics of individual areas vary according to the dominant vegetative species, site class, topography and other site factors. Well-dispersed and continuous areas of multi-layered forests with high quality habitat characteristics and attributes are common: (1) under optimum conditions on north slopes, (2) at high elevations, and (3) in cool, moist areas. The overstory trees are large diameter, tall and have obvious signs of decadence. Some are broken-topped, have mistletoe, or have platforms of branches capable of holding organic materials that serve as a nest. Snags are common and fallen trees visible on the ground, providing for adequate prey populations. Within true fir habitats or where hardwoods occur, mid-seral stage forested areas provide suitable habitat as well. Although overstory trees are smaller and stands are less dense, important structural elements, such as snags and nesting platforms, are present. South slopes and drier areas are more open due to frequent natural fires.

Fire Management Standards & Guidelines

MA5-35 Each LSR will be included in fire management planning as part of watershed analysis. Fire suppression in LSRs will utilize minimum impact suppression methods in accordance with guidelines for reducing risks of large-scale disturbances. Plans for wildfire suppression will emphasize maintaining late-successional habitat. During actual fire suppression activities, fire managers will consult with resource specialists (for example, botanists, fisheries and wildlife biologists, hydrologists) familiar with the area, these standards and guidelines and their objectives, to assure that habitat damage is

minimized. Until a fire management plan is completed for LSRs, suppress wildfire to avoid loss of habitat in order to maintain future management options.

MA5-36 - In LSRs, a specific fire management plan will be prepared prior to any habitat manipulation activities. This plan, prepared during watershed analysis or as an element of province-level planning or a LSR assessment, should specify how hazard reduction and other prescribed fire applications will meet the objectives of the LSR. Until the plan is approved, proposed activities will be subject to review by REO. REO may develop additional guidelines that would exempt some activities from review. In all LSRs, watershed analysis will provide information to determine the amount of CWD to be retained when applying prescribed fire.

MA5-37 - In LSRs, the goal of wildfire suppression is to limit the size of all fires. When watershed analysis, province-level planning, or a LSR assessment is completed, some natural fires may be allowed to burn under prescribed conditions. Rapidly extinguishing smoldering CWD and duff should be considered to preserve these ecosystem elements.

MA5-38 - Utilize an aggressive prescribed fire program to maintain long-term habitat quality and ecological processes within LSRs once LSR assessments and National Environmental Protection Act (NEPA) analysis are completed and site-specific decisions are made. Specific fire prescriptions shall be used until PNF can be effectively used. The use of PNF is outlined in the Wilderness Fire Management S&Gs. Those S&Gs also shall apply to LSRs.

MA5-39 - Report wildfires within activity centers to the appropriate District and/or Forest biologist. The biologist shall determine the need to contact the USFWS. Report fires that escape initial attack to the USFWS. Motorized and heavy equipment may be permitted by the Incident Commander to assure habitat protection.

MA5-40 - Wildfire prevention should be critical to habitat maintenance. During critical fire danger periods, increased prevention efforts should be undertaken, especially in high use recreation areas within LSRs and in areas adjacent to populated areas.

Calochortus persistens

Description

This 100-acre area consists of dry rocky outcroppings within the westside mixed conifer forest. The habitat for this State-listed Rare perennial species has been managed since 1982 under guidelines developed by the Forest in a species management guide. No other populations of this plant are known to exist on the Forest.

Management Goals

Maintain the currently known, and any newly discovered, *Calochortus* population's habitat in an undisturbed condition. Inventory similar habitats for potential population expansion opportunities.
Manage habitat to provide for a viable population of *Calochortus*. Manage the plant populations and species vigor in a way that would prevent the need to list this species as T&E.

Desired Future Condition

Habitat conditions for the *Calochortus persistens* consist primarily of undisturbed rocky outcroppings and openings. Conifers next to the primary habitat hold snow and moisture on the site. Habitat enhancement projects have removed the exotic, invasive weed species. Other management activities occurring within the area do not jeopardize the species or its habitat.

Standards and Guidelines

MA5-77 Prohibit any ground disturbance that would adversely affect the known habitat (by introducing weedy species) or physically disturbing existing plants. Disturbed areas near this habitat should be managed to exclude non-native invasive plant species.

MA5-78 Conduct programmed or permitted activities within the management area so as not to adversely affect the habitat values for the *Calochortus*.

Special Interest Areas

A small portion of the Condrey Mountain Blue Schist Type Section Geologic SIA extends into this FMU where it borders the Horse FMU along the Klamath River.

Description

Special Interest Areas (SIAs) are sites designated for recreational experiences where education and interpretation of unique or special natural resource values are emphasized. Highlighted are botanical and geologic features to increase Forest visitor appreciation of resource values and natural diversity within the Forest.

Management Goals

Manage for ecological processes and the unique features for which the area was designated.
Promote public use, education, interpretation and enjoyment of the special interest values of the area when such activities do not harm the values for which the area was designated.

Desired Future Condition

The vegetative, geologic and other natural features are enhanced to emphasize the unique resource for which the area was designated. Few signs of management activities are present, other than to provide public access and accommodations. Minor vegetative clearing is evident to allow Forest visitors to see vistas and utilize the areas. Educational or interpretive information on the ecological or scenic values of the area is provided. Sites are developed to various degrees. Sites range from no trails or facilities (fostering an educational, primitive recreational experience) to development of facilities such as parking lots, restrooms, information displays, boardwalks, or trails suitable for heavy visitor use. Visitors are directed to SIAs through maps, signs, and other publicity as appropriate.

Fire Management Standards & Guidelines

MA7-20 - Manage **prescribed** natural fire, prescribed fire, and biomass utilization to maintain the ecological processes within the SIA. Protect all facilities and developments.

Recreational Rivers

The fisheries are the Outstandingly Remarkable Values in the recreational segments of the Klamath River.

Description

This prescription applies to those Recreational River segments of either designated components of the National WSRs System or rivers being recommended for possible inclusion in the National System.

The Recreational classification applies to those rivers or sections of rivers that: (1) are free-flowing, (2) are readily accessible by road or railroad, (3) may have some development along the shorelines and (4) may have undergone some impoundment or diversion in the past.

For a complete listing, in the Forest Plan, refer to Table 4-25, Acres Allocated to Designated and Recommended Recreational Rivers (page 4-155).

Management Goals

Preserve the Recreational Rivers in a free-flowing condition. Protect the rivers and their immediate environments for the benefit and enjoyment of present and future generations.

Protect and enhance the outstandingly remarkable value(s) for which the river(s) are or would be designated, while providing for public recreation and resource uses that do not adversely impact or degrade those values.

Desired Future Condition

The waterway remains generally natural and riverine in appearance. The physical and biological integrity of the aquatic system is maintained. Habitat for anadromous and resident fish species is in good condition, capable of supporting viable populations of indigenous species. The river area may be developed for the full range of agricultural and forestry practices show evidence of past and ongoing timber harvest or include some residential, commercial, or similar development.

Standards and Guidelines

MA13-17 Fire management strategies should normally follow those of the surrounding area. Recognize and incorporate the Recreational river values into the fire suppression tactics. Prescribed fire may be used within the management area to maintain the ecological functions, if it maintains the outstandingly remarkable values for which the river was designated.

Retention

This prescription applies to those areas identified as having a Retention VQO. Refer to the Forest VQO map (in the Final EIS map packet). These areas are scattered throughout the Forest. They typically are found: (1) in the foreground of high visual sensitivity roads, trails, etc., (2) in the foreground or middle ground of areas with Variety Class A scenery or (3) areas seen from local communities (USDA Agriculture Handbook #462, National Forest Landscape Management, Vol. 2, Chapter 1). These roads and trails typically receive high levels of public use, or access recreation sites or areas with visually pleasing scenery.

Management Goals

Provide a level of attractive, forested scenery by maintaining the areas in a natural or natural-appearing condition. Manage human activities so they are subordinate to the characteristic landscape. Also, manage human activities so they are not evident to the casual Forest visitor.

Manage for a programmed, sustained harvest of wood products in areas that are capable, available, and suitable for timber management.

Maintain stand health, as well as resilience to wildland fire, insect, disease, and other damage.

Desired Future Condition

The signs of management activities are not apparent. Views from visually important roads and trails appear forested and provide a natural or natural-appearing forest.

Vegetative or ground-disturbing management activities that have been implemented repeat form, line, color, and texture that represent characteristics of the landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc. are not evident to the average Forest visitor.

Fire Management Standards & Guidelines

MA11-14 - Use prescribed fire to reduce natural fuel buildups, to treat post-harvest fuels and to influence vegetative development or composition when there is no market for the slash or down wood.

MA11-15 - Design fuelbreaks to mimic the natural characteristics of the area. On steep ground, design units that are operationally feasible and effective to treat fuels.

Partial Retention

This prescription applies to those areas identified with a Partial Retention VQO. It encompasses 188,500 acres. Refer to the Forest VQO map (in the Final EIS map packet). These areas typically are either in the foreground of moderate visual sensitivity roads, trails, etc., or the middleground of high sensitivity roads.

Scattered throughout the Forest, these areas are primarily in the middle distances (1/2 to 3 miles) from selected roads and trails.

Management Goal

Provide an attractive, forested landscape where management activities remain visually subordinate to the character of the landscape. Manage human activities so they are subordinate to the character of the landscape.

Maintain stand health as well as resilience to wildland fire, insect, disease, and other damage.

Desired Future Condition

Areas managed to meet a Partial Retention VQO may show evidence of management activities but are visually subordinate to the characteristic landscape in form, line, color, or texture of landscape elements. Views from visually important roads and trails appear forested and provide a nearly natural looking landscape.

Lands capable of growing coniferous vegetation are forested.

Fire Management Standards & Guidelines

MA15-15 - Use prescribed fire to reduce natural fuel buildups, to treat post harvest fuels and to influence vegetative development or composition when there is no market for the slash or down wood.

MA15-16 - Design fuelbreaks to mimic the natural characteristics of the area. On steep ground, design units that are operationally feasible and effective to treat fuels.

General Forest

Lands that are capable, available, and suitable to be managed for a host of resource conditions, including structural component and commercial outputs. They currently support a variety of vegetation including shrubs, hardwood species, and various tree species in varying sizes and densities. They are areas where timber outputs, consistent with Forest-wide management goals, are of a high priority.

Management Goals

Provide a programmed, non-declining flow of timber products, sustainable through time. These levels may vary from year to year, based on ecological processes. Maintain conifer stocking levels and high growth rates commensurate with the capability of the site to produce wood fiber. Intensively manage young regenerated stands to maximize growth potential.

Maintain stand health, as well as resilience to wildland fire, insect, disease, and other damage. Emphasize salvage and restoration from catastrophic events. Reforest capable, but currently non-stocked, lands.

Emulate ecological processes and stand and landscape patterns where possible. Within harvest units, maintain appropriate structure, composition, and ecological functioning of the area.

Provide for snags and hardwood habitat to help maintain viable populations of wildlife species that require these structural components.
Meet the VQOs. Achieve less modified visual conditions when possible.

Desired Future Condition

The mosaic of healthy forest stands is comprised of a variety of vegetative species. The composition of individual stands varies considerably depending on forest type and seral stage development. Although openings with hardwoods, shrubs, grasses, and forbs are apparent, forest stands consist primarily of conifers. In some areas, the conifer component of the vegetation is sparse (due to vegetative manipulations or natural conditions). All areas maintain some structural components of older stands. Some areas support mature forest stands. The oldest stands are between 80 and 120 years old. Generally, this portion of the forest has younger trees than the surrounding areas. Stand sizes vary with topography and the landscape pattern of surrounding areas.
Habitat for species, which use early and mid-seral stages, is abundant.

Fire Management Standards & Guidelines

MA17-15 - Use prescribed fire to reduce natural fuel buildups, to treat post harvest fuels and to influence vegetative development or composition when there is no market for the slash or down wood.

MA17-16 - Design fuelbreaks to mimic the natural characteristics of the area. On steep ground, design units that are operationally feasible and effective to treat fuels.

3.2.3 FMU Characteristics

Agency Administrator for FMU lands and stakeholders:

- Happy Camp District Ranger for majority of the federal lands
- Scott River District Ranger for Humbug Creek
- CALFIRE Siskiyou Ranger Unit Chief for private property outside of KNF boundary's
- Timber Products and Fruit Growers Supply Co. are major stakeholders

3.2.3.1 Safety

- Ash Creek Bridge Weight Limits
- Narrow, restricted spot on Klamath River Road , pickups only, no large equipment
- Poor access, dead end roads, limited parking; Dutch , Ash, Empire Creek Roads
- Rattlesnakes, Poison Oak, Stinging Insects
- Potential Marijuana Gardens
- Narrow, Mountainous Roadways that can be very slippery when wet
- Aviation hazards, utility lines crossing the Klamath River
- Interstate 5 corridor on East side of FMU

Major access points into the fireshed are from Highway 96 or from the Yreka/Hawkinsville area. Several turnoffs exist along Highway 96, major of these would be crossing the Ash Creek Bridge (weight limit issues with this bridge are listed below) to access the lower end of Humbug Creek and the Southside of the Klamath River (County roads 8J001 & 8J002). Further down Highway 96 is the Lumgrey Creek road (48N06), and the western end of the FMU, located south of the Klamath River can be accessed by crossing Walker Bridge and turning either east or west on County road 8G004 (Walker Road).

Several safety issues related to the transportation system need to be noted. The Ash Creek Bridge is located on the Eastern end of the FMU and would be used to access the Southside of the Klamath River and also up into Humbug Creek. This is a narrow, weight limited bridge that also has a poor turn radius intersection form the Highway 96 approach. Posted weight restrictions are 12, 17, and 23 tons dependant on axle configurations, with 12 ton being the limit for two axle vehicles. The two axle fire trucks used in this area (USFS & CALFIRE) rate out with a GVW of approximately 17 tons. An analysis was conducted by the State of California, Department of Transportation, in 2001 that the 17 ton engines (and crew carriers that weight less) can cross the structure if the 10-mph speed limit is observed and the vehicle travels near the center of the bridge. Tactical water tenders, like the 1,500 gallon vehicles used by the USFS, can be allowed over the structure under the restrictions of a partially filled tank (maximum rear axle weight limited to 18,200 pounds). Larger tenders would basically need to cross empty. This is the practice in place currently. The analysis letter is on file and available for review at the Oak Knoll Fire Office.

Traveling on the South side of the Klamath River, on what is called the Klamath River Road), after crossing either the Ash Creek or Walker Bridges, is a very narrow, tight road location directly across from the confluence of Lumgrey Creek and the Klamath River. This is roughly half-way between these two bridges. The road in this location was built through a rock bluff that prevents larger vehicles from passing safely. Even type 3 engines and crew carriers are considered too large to navigate through this section and it is avoided locally. Depending on the incident location, access can be made from either end approaching this location.

Potential safety issues are present on several road systems that access lands north of the Klamath River from Highway 96. Of note are; Ash, Dutch, and Empire Creek roads, along with the Lime Gulch road. These roads all have similarities in that they are largely dead-ends that go into narrow, restricted canyons with limited parking availability. The Ash Creek road leads up into a very steep, narrow, rocky canyon. There are several structures here with one full time resident. This road has limited parking areas in which to get vehicles, especially larger apparatus, out of the roadway. Similar issues are present with the Dutch Creek road, located farther down Highway 96 from the Ash Creek road, which has approximately 4-5 full time residents located in the first 2-3 miles. This road dead ends and also has limited pull-outs, while some small fields do exist in which to get vehicles off the road, planning needs to occur before committing large numbers of vehicles up into these two drainages. It is recommended that overhead assess the situation while having resources stage at the entrance to these areas. Empire Creek road and Lime Gulch are similar; all are situated in south facing, chute type canyons; with a heavy brush component.

Several road systems, such as in the Humbug Creek area, China Peak, Cedar Flat, Ryder Gap areas have roads built upon granitic or red clay soils. These roads can be very slick and treacherous to drive when wet and caution would need to be taken if there were thundershowers or summer rains.

The fireshed has an extensive network of forest service and old logging roads, especially in the checker board ownership pattern where the better soils are located that supports timber production. These areas have been developed with multiple entry's made for timber extraction. Most of these roads are in good to moderate condition, with many of the roads on the private timber company holdings not having posted numbers and having company locked gates on them. Contact information is listed below for Fruit Growers Supply Co. and Timber Products to gain access into these privately owned sections of land.

Older, unused roads may require vegetation brushing, but most may be accessed by type 3 Engines. These are typical, mountainous roads which are narrow, and normal precautions should be taken. Most downhill sides of roads are steep, with long drop-offs. Turnouts are available, but on a limited bases for passing.

The Interstate 5 travel corridor passes through the FMU on CALFIRE DPA lands on the eastern end.

Other safety concerns in the fireshed would include the presence of rattlesnakes, poison oak (under approximately 3,500 feet in elevation), and stinging insects, such as yellow jacket hornets; all of these are common in this area.

Aviation hazards do exist along the Klamath River in the form of occasional utility lines stretched across the river to service private property and structures. Consult the KNF aviation hazards map for these locations.

The potential exists to have marijuana gardens anywhere in the fireshed.

3.2.3.2Physical

The Federal DPA jurisdiction is split in this FMU with the District Rangers located in Happy Camp and Fort Jones having Agency Administrator (AA) responsibilities in this fireshed. The Scott River District Ranger (headquartered in Fort Jones) is the AA for the Humbug Creek watershed in this FMU; this is located in the Southeast portion of the FMU. All other federal lands in the FMU are under the District Ranger headquartered in Happy Camp. The Chief of the Siskiyou Ranger Unit (CALFIRE) would be the AA for privately owned lands protected by CALFIRE outside any KNF lands.

Federal fire protection duties are supervised by Klamath NF Division One, who works out of the Oak Knoll Work Center in Klamath River, for all federal DPA lands in the FMU.

The Haystack Fire Management Unit encompasses a diverse, broken landscape, running west to east; major drainages include McKinney, Barkhouse, Humbug, Lumgrey, Empire, and Dutch Creeks. The Klamath River runs through the middle of the FMU, creating almost equal parts north and south. Numerous peaks dot the landscape, with a backbone ridge forming a portion of the Southern boundary that divides the Scott and Klamath River drainages. Elevations range from 6,566 feet on Cottonwood Peak to 1,656 feet on the Klamath River.

While areas of good soils exist within the FMU, the trend is to poorer, shallow soils. Harsh, rocky areas are widespread throughout supporting brush to scrub woodlands at best.

Air quality issues, off site from potential smoke inversions restricting incident related activities, would be to the east, in the Interstate 5 travel corridor and greater Yreka area, as the normal westerly wind patterns for this FMU could push smoke in that general direction. This condition has been observed in the recent past.

The Fruit Growers Supply Co. and Timber Products (MichCal) are major stakeholders inside the fireshed, owning numerous sections of land that are under timber management practices.

3.2.3.3 Biological

A small portion of the Collins LSR is present in the Southwest portion of this FMU. This is a checkerboard LSR that is mixed in with privately held sections of timber company lands. Also there is a Wildland-Urban Interface (WUI) component to some of this LSR due to the presence of structures on private property in close proximity to LSR designated federal lands. There are also six Activity Centers scattered throughout the FMU.

The *Calochortus persistens* (Siskiyou mariposa lily) is located along a major ridge on the southern boundary of this FMU.

3.2.3.4 Resources

- Major communications sites on the ridge above Humbug Creek
- Mase Peak repeater (KNF and Black Net Tone 1)
- Paradise Craggy Lookout (CALFIRE) on eastern boundary of the FMU
- Grazing Allotment
- 120-130 Structures inside FMU

The Haystack FMU has approximately 120-130 structures inside of it. Many are full-time residences with assorted outbuildings. More detailed information on these structures is available at the Oak Knoll Work Center Fire Office.

These structures for the most part are located along the Klamath River and up and down some of the creeks in the FMU. For the most part these structures are either located where they would not be threatened by wildfire, or are readily defensible. Of concern would be those structures located in upslope situations where their attempted defensive, due to narrow, restricted access, and/or lack of safety zones; would put firefighters at a level of unacceptable risk.

With the given dynamics of wildland fires, these areas of concern would generally be those structures located away from the river and up the side drainages. Of primary issue would be Dutch Creek (discussed under safety) and the structures in the Klamath Highlands residential location. The Klamath Highlands are scattered homes situated above the old golf course and are almost directly across the river from the Oak Knoll Work Center. These structures are in exposed, upslope situations; however, recent Klamath River Fire Safe Council fuels reduction projects have markedly improved their defensibility. They are surrounded by decadent brush fields originating from an old fire scar.

There is a recently constructed house up Barkhouse Creek that is remote in nature and would present protection issues; this is in section 36, T46N & R9W, and there may be an occupied mining claim up Lumgrey Creek that is difficult to access in section 10, T47N & R8W.

The Woodchopper Cabin is a historic cabin located in section 34, T47N & R8W, in Woodchopper Gulch in the Lumgrey Creek drainage (road 47N79Y). There are several old buildings located here that are at the end of a very narrow road. Its location makes it indefensible, and with any active fire in proximity, the best advice would be to block off the road and deny passage to anyone.

Other values at risk would be electronic related communication sites located on several points along the ridge above Humbug Creek on Gunsight Peak, and Mahogany Point. These are major communication sites for Yreka and Siskiyou County. There is also a microwave telephone relay screen on the ridge top

at the head of Barkhouse Creek , these is used to relay microwaves from the Klamath River over into Scott Valley by the Siskiyou Telephone Company.

On the north end of the FMU, on the boundary with the Cottonwood FMU, is a federal communication site that houses the KNF repeaters for Tone 1 (Klamath Forest Net and Black Net). This is a small building with a solar panel, located on Mase Peak, in the Northwest of section 12, T47N & R8W, 41º56.4125 by 122º42.7124.

Key Contacts

Fire Officials:

1. CAL Fire: contact YICC (530) 842-7066
2. Klamath River Volunteer Fire Department
   -Janet Jones (Chief) (530) 496-3361

Private Parties/Companies:

1. Fruit Growers Supply Co.: (530) 475-3453
   -Terry Salvestro (Regional Manager) (530) 598-4860
2. Timber Products: (530) 842-2310
   -Mark Fleming (530) 598-0807
3. Caltrans: (530) 842-2723
4. Klamath River Fire Safe Council 465-2411

Grazing Allotments

The following tables are allotment descriptions and permittee contact information for active Oak Knoll allotments that may have livestock within the Beaver FMU as of 2010. As cattle have a tendency to drift, adjacent allotment information is provided. You can also contact Stephanie McMorris, KNF Range Specialist, at 530-468-1226 or 530-598-9330, and she can pass on fire information to the Permittees.

Allotment Descriptions

Active Allotments/ Permittees	Acres	Location	On/Off Dates
Dry Lake *Hagedorn, Hammond, R. Rainey*	41,511	**General Area**: Doggett Creek and Jayne's Canyon Drainage **Boundary**: Condrey Mt. East along the Siskiyou Crest to Wards Gap. Follows West Beaver/Beaver Creek South to Hwy 96. Follows Hwy 96 West to Oak Bar. North back up to Condrey Mtn.	4/15-10/15
East Beaver *Lemos, Hagedorn*	67,062	**General Area**: Beaver Creek and Lumgrey/Empire Creek Drainages **Boundary:** Mouth of Beaver Creek North following West Fork Beaver Creek to Wards Gap. NE along the Siskiyou Crest to Siskiyou Peak. South to Shaft Rock and then South to Ditch Creek. Follows Hwy 96 West to Beaver Creek Rd.	4/1-10/31

Cattle are turned out in the spring and stay in the lower elevations until June or July. Then they drift or are driven up to the higher ranges for the summer months. Throughout the season the permittee checks on the cattle, herds them to other areas, and replenishes salt licks. Some cattle start to make their way home in the fall and the remaining cattle are rounded up by the permittees starting in early October.

Permittee Contact Information

Permittee Name	Permittee Phone	Permittee Address	Allotment(s)
Hagedorn, Harvey	459-3843	7124 Ager Road Montague, CA 96064	Dry Lake, East Beaver
Hammond Ranch (Clyde)	467-5224	1220 N Hwy 3 Etna, CA 96027	Dry Lake
Lemos, Edward & Jan	475-3633	18600 Cottonwood Ck. Rd. Hornbrook, CA 96044	Ash Creek, Hornbrook, East Beaver
Rainey, Robert Jr	496-3362	1115 Horse Ck. Rd. Horse Creek, CA 96045	Horse Creek, Dry Lake

Incident Facilities and Support

The Haystack FMU does not have areas large enough to support a base camp, while spike camps can be located anywhere; the local areas used for an incident base on recent incidents are the Klamath River Community Hall and the Klamath River School. Both of these have limitations and lend themselves more to smaller incident size. Also used recently, or that should be considered, would be the Collier Rest Area on I-5 or the Siskiyou County Fairgrounds in Yreka, these areas offer much better logistical support locations.

Helibase considerations should be the Siskiyou County airport for type 1 helicopters and perhaps the Scott Valley Helibase for type 2's. Both of these are within reasonable flight times and offer better support facilities than anything in the local area.

With the fairly high road density in the FMU, helispot needs would be at a minimum, with rotor wing use mostly being confined to external applications. Any crew shuttles would be limited into the small roadless areas of the FMU; such as in the China Peak, Vesa Creek areas, or in the Cottonwood Peak area. Centrally located to these areas for aviation support is the Gottville Helibase; 41° 51.681 by 122° 44.971, section 2, T46N R8W. This enhanced helispot is accessed from Highway 96 just below the Lumgrey and Empire Creek confluences with the Klamath River. There is a short driveway that goes uphill behind a locked gate that has parking areas and two landing pads; this spot has been used in previous years to support troop shuttles into nearby areas. There has been an issue with noxious weeds at the Gottville Helibase in past years; but steps are being taken to mitigate this.

Water for helicopter bucket operations would be readily available from the Klamath River, with longer turn times to be expected for increasing distances from the river.

Water sources for ground based equipment are scattered throughout the FMU, depending on incident location. Overall, this is a fairly dry FMU once you get away from the river, with small streams that run

low by mid-to-late season and earlier in drier years. The "best of the best" of these water sources are located on the Oak Knoll fire dispatch map and a table exists showing road numbers, legals, and a lat/long for each one. However many drainage crossings potentially lend themselves to short-term development on an as needed basis. Water tender support should be utilized, most likely accessing water from the river.

3.2.4 Fire Environment

- Potential for large intense fires
- FMU has a history of large fires
- Local, up canyon wind conditions exist
- Extensive old growth brush fields present
- Smoke management issues present to Yreka and I-5
- High lightning concentration area

Fire Behavior

Current vegetation patterns are largely a result of timber harvest, fires, and site quality. The majority of the FMU is dominated by brushfields (Whiteleaf Manzanita and Buckbrush predominately) and oak woodlands that are reflective of the lower site quality growing conditions and drier conditions found in this FMU. While pockets, or areas of good soil, support timber production in the FMU, these stands don't generally have the growth characteristics seen in west side stands.

Timber harvest practices have focused on these better sites. Road systems have been developed into most areas that support timber production and fairly intensive management has occurred. Almost all stands have been either regeneration harvested, creating second growth stands; or selectively logged. Large diameter trees have been removed from almost all areas; leaving dense, small diameter stands lending themselves to thinning prescriptions.

The largest influence has been wildfire. In the past 50-60 years, large and numerous bigger fires (100 acres+), combined with dry conditions and poorer site quality; have created large continuous stands of brush. These old growth brushfields would be classified as a fuel model 4, creating explosive burning conditions under normal summer conditions. A large wildfire burning in 1955 was extensively salvaged, with the better sites being planted to Ponderosa Pine, with terrace planting being utilized, which is evident in many areas. These pine stands interspersed with brushfields/scrub oak woodlands creates large expanses of continuous fine fuel beds, creating a "perfect storm" scenario for fast moving fires.

The FMU is typified by sharp, dissected ridges and gulches in a dry land setting. This landscape pattern of chutes and chimneys creates natural paths for fires to burn across. This is a classic "fire ground" scenario that can generate fast moving fires; especially on the south facing slopes that drain into the Klamath River. Highway 96 runs along the north side of the Klamath River at the base of these south facing slopes in the middle of the FMU. This heightens the potential for human caused fires spreading into the steep gulches and draws that drain from the north, adding to the potential volatility in these areas, these are the areas that have narrow, dead end roads with some structures dispersed throughout; creating a very heads up safety situation.

Potential to control problems would be classified as very high due to the abundant flammable fuels and dry conditions found in the FMU. Large and intense fires should be expected.

Fuels treatments have focused on areas within old burns that have better site potential to support conifer tree establishment. These have included dozer piling for site preparation, and mastication efforts in relation to release for growth silvicultural prescriptions. On a smaller scale these have created a mosaic of age classes and have served to help break up the continuity of the even aged vegetation created by stand replacing fire events. These activities are generally in the Humbug Creek area and on the benchy ground above the Klamath River to the south of Beaver Creek.

Fire History

The signature fire was the 1955 Haystack fire, burning 60,000 acres, and leaving an indelible footprint inside the FMU. This fire exhibited extreme burning conditions in every sense of the term, with large expansive brushfields its legacy in evidence today.

The Haystack fire started in the west side of the FMU in the Barkhouse Creek drainage and spread rapidly to the east and north. The fire jumped the Klamath River and burned up Beaver Creek in the Beaver FMU. It burned extensively in Humbug Creek and crossed out of that watershed and down into the hills above Yreka and Hawkinsville, with burnout operations being conducted around some structures in these areas.

This large fire spread primarily to the east, a pattern observed on other fires in 2001 and 2007. While fires are typically slope driven by nature of the topography in this regional area, the predominant summer pattern of wind flow from the west in this FMU, coupled with the local winds, will readily push fires to the east. Of concern with this pattern is the proximity and relationship of Yreka, its surrounding areas, and the I-5 travel corridor to this FMU.

Large fires have burned in almost every decade inside this FMU over the past 60 years, and there is no reason to expect this trend to change.

Weather

The Haystack FMU is located in somewhat of a transitional area geographically, between the wetter west side and drier inland regions. These drier conditions are evidenced by species such as Juniper being found on the east side of the FMU. Weather patterns trend to dry summers typical of the area, where periods of up to 90 days without rainfall are not uncommon. Rainfall averages approximately 15-20 inches per year.

A local wind condition exists in the summer months during high pressure patterns. It is not uncommon to see a fairly strong, up canyon wind blowing right on the river in late afternoon until early evening. This “river wind”, is prevalent along the river corridor and is influenced to stronger gusts where the canyon is narrower, at the mouth of larger side drainages, and where the river makes sharp bends. This local, ‘river wind”, has been a contributing factor to large fire growth in several fires located inside the river canyon corridor. Observed fire behavior has been of fire runs being made side hill, up canyon, and parallel to the river; with short to medium range spotting. This local wind may not be reflected in predictive services weather forecasts.

These up canyon winds can push smoke into the Yreka, Shasta Valley, and Interstate 5 areas; creating very poor air quality issues that have been observed on numerous occasions.

Outside of these local wind conditions, during high pressure periods, winds are relatively light, and diurnal in nature. Higher winds are normally associated with frontal passages. These clam conditions can result in smoke inversions that may influence incident management, especially aviation operations. This is somewhat typical for the incised and poorly ventilated drainages in the regional area that is reflected in the Haystack FMU.

Foehn or east winds can occur in the area, especially in late summer and fall months; these can be quite strong and bring in very low humidity's.

The Haystack FMU historically has one of the highest concentrations of lighting on the Klamath National Forest. This is depicted in an analysis of lightning fire density from the time period of 1922-2003. This shows the FMU as being a "lightning alley", with a thunderstorm pattern of development to the south, over the Scott Valley area, and tracking north. This is a common pattern usually seen several times a year.